

# Marc Girons Lopez

<b>Address</b>	Oberwiesenstrasse 50 8050 Zurich (Switzerland)	<b>Website</b>	<a href="http://gironslopez.me">gironslopez.me</a>
<b>Birth</b>	5 September 1986 Barcelona (Spain)	<b>Telephone</b>	+41 (0) 78-775 89 93
		<b>E-mail</b>	<a href="mailto:gironslopez@gmail.com">gironslopez@gmail.com</a>
		<b>Citizenship</b>	Spain

I am a hydrologist with an interdisciplinary background working as postdoctoral researcher at the University of Zurich. I aim at contributing to build up knowledge and understanding about water related issues to make society more resilient and sustainable. I believe in continuous learning and communication and I am also interested in societal behaviour and data analysis. Everything is connected!

## Professional Experience

<i>feb 2017 — aug 2018</i>	<b>Postdoctoral Researcher</b> • University of Zurich (Switzerland) My research focuses on improving the realism of the snow routine of the HBV rainfall-runoff model while maintaining a low model uncertainty. Also, I contributed to glacio-hydrological modelling of future peak flows in remote valleys of Tajikistan.
<i>aug 2011 — oct 2016</i>	<b>Graduate Teaching Assistant</b> • Uppsala University (Sweden) Lecturing, leading seminars, and leading and assisting in laboratory and field activities for both undergraduate and graduate courses.
<i>aug 2011 — oct 2016</i>	<b>Graduate Research Assistant</b> • Uppsala University (Sweden) Design and implementation of research projects within hydrology and natural disaster science, including defining research questions, modelling, data analysis, and reporting scientific results.
<i>jun 2009 — aug 2009</i>	<b>Quality Control Intern</b> • Laboratori Català de Control (Spain) Quality control tests of cement, concrete and anchorages. Tests of soil properties, water sampling and analysis. Defining procedures for adopting ISO rules.
<i>jul 2008 — sep 2008</i>	<b>Environmental Consultant Intern</b> • URS Corporation (Spain) Environmental control tests of petrol stations, soil decontamination, and hydrogeological data processing. Fauna and sediment sampling for water quality control of rivers and dams.

## Education

<i>aug 2011 — oct 2016</i>	<b>Doctor of Philosophy (PhD)</b> • Uppsala University (Sweden) <i>Hydrology and Water Resources Science</i> Thesis: Information Needs for Water Resource and Risk Management: Hydro-Meteorological Data Value and Non-Traditional Information.
<i>aug 2009 — jun 2011</i>	<b>Master of Science (MSc)</b> • Uppsala University (Sweden) <i>Earth Sciences (Hydrology/Hydrogeology)</i> Thesis: Modelling Climatic and Hydrological Variability in Lake Babati, Northern Tanzania.
<i>sep 2004 — jun 2009</i>	<b>Bachelor of Science (BSc)</b> • Universitat Autònoma de Barcelona (Spain) <i>Geology</i>
<i>aug 2007 — jun 2008</i>	<b>Exchange student</b> • Université Joseph Fourier — Grenoble I (France) <i>Geology and Earth Sciences</i>

# Publications

## Peer-reviewed Publications

- Di Baldassarre, G., Nohrstedt, D., Mård, J., Burchardt, S., Albin, C., Bondesson, S., Breinl, K., Deegan, F. M., Fuentes, D., **Girons Lopez, M.**, Granberg, M., Nyberg, L., Rydstedt Nyman, M., Rhodes, E., Troll, V., Young, S., Walch, C., and Parker, C. F. (2018). "An Integrative Research Framework to Unravel the Interplay of Natural Hazards and Vulnerabilities". In: *Earth's Future*. ISSN: 2328-4277. DOI: [10.1002/2017EF000764](https://doi.org/10.1002/2017EF000764).
- Breinl, K., Di Baldassarre, G., **Girons Lopez, M.**, Hagenlocher, M., Vico, G., and Rutgersson, A. (2017). "Can weather generation capture precipitation patterns across climates, spatial scales and under data scarcity?" In: *Scientific Reports* 7:5449. ISSN: 2045-2322. DOI: [10.1038/s41598-017-05822-y](https://doi.org/10.1038/s41598-017-05822-y).
- Girons Lopez, M.**, Di Baldassarre, G., and Seibert, J. (2017). "Impact of social preparedness on flood early warning systems". In: *Water Resources Research* 53:1, pp. 522–534. ISSN: 1944-7973. DOI: [10.1002/2016WR019387](https://doi.org/10.1002/2016WR019387).
- Girons Lopez, M.** and Seibert, J. (2016). "Influence of hydro-meteorological data spatial aggregation on streamflow modelling". In: *Journal of Hydrology* 541, pp. 1212–1220. ISSN: 0022-1694. DOI: [10.1016/j.jhydrol.2016.08.026](https://doi.org/10.1016/j.jhydrol.2016.08.026).
- Mbanguka, R. P., Lyon, S. W., Holmgren, K., **Girons Lopez, M.**, and Jarsjö, J. (2016). "Water Balance and Level Change of Lake Babati, Tanzania: Sensitivity to Hydroclimatic Forcings". In: *Water* 8:12. ISSN: 2073-4441. DOI: [10.3390/w8120572](https://doi.org/10.3390/w8120572).
- Girons Lopez, M.**, Wennerström, H., Nordén, L.-Å., and Seibert, J. (2015). "Location and Density of Rain Gauges for the Estimation of Spatial Varying Precipitation". In: *Geografiska Annaler: Series A, Physical Geography* 97:1, pp. 167–179. ISSN: 1468-0459. DOI: [10.1111/geoa.12094](https://doi.org/10.1111/geoa.12094).

## Publications in Preparation

- Girons Lopez, M.**, Vis, M., and Seibert, J. (2018a). "Assessing the Use of Additional Data for Temperature-Index Snowmelt Modelling in Hydrological Models".
- Girons Lopez, M.**, Vis, M., and Seibert, J. (2018b). "Evaluating the Complexity of Snow Processes for Distribution Function Hydrological Models".
- Rivera, S. J., **Girons Lopez, M.**, Seibert, J., and Minsker, B. S. (2018a). "Flood depth determination using volunteered geographical information".
- Rivera, S. J., **Girons Lopez, M.**, Seibert, J., and Minsker, B. S. (2018b). "Probabilistic Flood Mapping Using Volunteered Geographical Information".

## Theses

- Girons Lopez, M.** (Oct. 2016). "Information Needs for Water Resource and Risk Management: Hydro-Meteorological Data Value and Non-Traditional Information". PhD thesis. Uppsala University, Department of Earth Sciences, p. 74. ISBN: 978-91-554-9679-1.
- Girons Lopez, M.** (2011). "Modelling Climatic and Hydrological Variability in Lake Babati, Northern Tanzania". MA thesis. Stockholm University, Department of Physical Geography, p. 57.

## Conference Contributions

- Fourniadis, Y., Free, M., Manning, J., Beckett, O., Bolch, T., and **Girons Lopez, M.** (Feb. 2018). "Impact Of Climate Change On Glaciers And Glacial Runoff In Tajikistan". In: *New Dimensions for Natural Hazards in Asia: An AOGS-EGU Joint Conference* (Tagaytay, Philippines).
- Girons Lopez, M.**, Vis, M., and Seibert, J. (Feb. 2018a). "Realism versus simplicity in the snow routine of the HBV model". In: *SnowHydro 2018* (Heidelberg, Germany).
- Girons Lopez, M.**, Vis, M., and Seibert, J. (Apr. 2018b). "Realism vs Simplicity: Depicting snow processes in a simple hydrological model". In: *Geophysical Research Abstracts* (Vienna, Austria). Vol. 20. EGU, p. 1266.
- Breinl, K., Di Baldassarre, G., and **Girons Lopez, M.** (Apr. 2017). "Reduced-complexity multi-site rainfall generation: one million years over night using the model TripleM". In: *Geophysical Research Abstracts* (Vienna, Austria). Vol. 19. EGU, p. 3065.
- Girons Lopez, M.**, Di Baldassarre, G., and Seibert, J. (Apr. 2017). "Strengthening flood warning systems: the benefits of encouraging social preparedness". In: *Geophysical Research Abstracts* (Vienna, Austria). Vol. 19. EGU, p. 14212.
- Girons Lopez, M.**, Vis, M., and Seibert, J. (Oct. 2017a). "Re-thinking the snow routine of HBV". In: *Cool models for a warm climate — operational snow models for the present and future climate* (Finse, Norway).
- Girons Lopez, M.**, Vis, M., and Seibert, J. (Apr. 2017b). "Realism versus simplicity in the snow routine of the HBV model". In: *Geophysical Research Abstracts* (Vienna, Austria). Vol. 19. EGU, p. 13395.
- Girons Lopez, M.**, Di Baldassarre, G., Grabs, T., Halldin, S., and Seibert, J. (Apr. 2016). "Exploring the Role of Social Memory of Floods for Designing Flood Early Warning Operations". In: *Geophysical Research Abstracts* (Vienna, Austria). Vol. 18. EGU, p. 15179.
- Girons Lopez, M.**, Di Baldassarre, G., and Seibert, J. (June 2016). "Impact of Social Memory on the Efficiency of Flood Early Warning Systems (FEWS)". In: *INTERPRAEVENT 2016 – Extended Abstracts* (Lucerne, Switzerland). International Research Society INTERPRAEVENT, p. 220. ISBN: 978-3-901164-23-1.
- Rivera, S. J., **Girons Lopez, M.**, Seibert, J., and Minsker, B. S. (Dec. 2016). "Probabilistic Flood Mapping using Volunteered Geographical Information". In: *2016 Fall Meeting, AGU* (San Francisco, California). AGU, p. 134525.
- Rivera, S. J., **Girons Lopez, M.**, Minsker, B. S., and Seibert, J. (July 2015). "Probabilistic Flood Mapping using Volunteered Geographical Information". In: *3rd CUAHSI Conference on Hydroinformatics* (Tuscaloosa, Alabama). CUAHSI.
- Girons Lopez, M.**, Seibert, J., Halldin, S., and Wennerström, H. (July 2013). "Value of distributed precipitation for flood early warning: A case study for a pre-alpine catchment in Switzerland". In: *Knowledge for the Future - Joint IAHS-IAPSO-IASPEI Assembly* (Gothenburg, Sweden).
- Mbanguka, R. P., **Girons Lopez, M.**, and Jarsjö, J. (Apr. 2013). "A Water Balance Model for assessing Hydro Climatic Variability in Tropical Lake Systems: Application to Lake Babati and Lake Emakat, Northern Tanzania". In: *Geophysical Research Abstracts* (Vienna, Austria). Vol. 15. EGU, p. 3154.

# Teaching

## Teaching experience

2011	<b>Global Hydrology</b> 10 ECTS; second cycle (Uppsala University) Field activities (10 hours).
2011 — 2012	<b>Distribution and Treatment of Drinking Water</b> 5 ECTS; second cycle (Uppsala University) Laboratory activities, grading (20 hours).
2012	<b>Statistical Methods in Hydrology</b> 5 ECTS; second cycle (Uppsala University) Grading (5 hours).
2012 — 2014	<b>Groundwater and Runoff modelling</b> 15 ECTS; second cycle (Uppsala University) Laboratory activities, grading (20 hours).
2012 — 2014	<b>Runoff</b> 5 ECTS; second cycle (Uppsala University) Laboratory activities (10 hours).
2012 — 2015	<b>Soil Mechanics and Engineering Geology</b> 10 ECTS; first cycle (Uppsala University) Lecturing and grading (10 hours).
2012 — 2016	<b>Hydrology and Water Resource Management</b> 10 ECTS; first cycle (Uppsala University) Lecturing, field and laboratory activities, grading (70 hours).
2012 — 2016	<b>GIS for Water Resources</b> 5 ECTS; second cycle (Uppsala University) Laboratory activities, grading (60 hours).
2013	<b>Climate and Landscape</b> 10 ECTS; second cycle (Uppsala University) Lecturing (10 hours).
2013 — 2014	<b>Field Course in Earth Science II</b> 5 ECTS; first cycle (Uppsala University) Field activities (20 hours).
2013 — 2016	<b>Meteorology, hydrology and Environmental Measurement Techniques</b> 15 ECTS; first cycle (Uppsala University) Field and laboratory activities, and seminars (70 hours).
2015 — 2016	<b>Field Methods in Earth Science</b> 5 ECTS; second cycle (Uppsala University) Field and laboratory activities (60 hours).
2015 — 2016	<b>Groundwater and Surface Water Modelling</b> 10 ECTS; second cycle (Uppsala University) Lecturing, laboratory activities and seminars (20 hours).
2015	<b>Snow Physics and Hydrology</b> 10 ECTS; second cycle (Uppsala University) Laboratory activities (10 hours).

## University pedagogical education

2015	<b>Academic Teacher Training Course</b> 5 Weeks, full-time (Uppsala University)
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## Representation Duties

2014 — 2016	<b>PhD student representative</b> • CNDS I was elected as PhD student representative to the Program Board of the Centre for Natural Disaster Science (CNDS).
2013	<b>PhD student representative</b> • Uppsala University I was elected as PhD student representative to the Board of the Department of Earth Sciences at Uppsala University.
2007	<b>Student representative</b> • Universitat Autònoma de Barcelona I was elected as student representative to the Board of the Section of Geology at Universitat Autònoma de Barcelona.

## Skills

<b>Programming</b>	Python • Matlab • L <sup>A</sup> T <sub>E</sub> X • Fortran
<b>Software</b>	ArcGIS • QGIS • HBV • Git • Inkscape • Linux
<b>Instrumentation</b>	Campbell data loggers • hydro-meteorological sensors
<b>Languages</b>	<b>Native</b> Catalan • Spanish <b>Full professional proficiency</b> English <b>Professional working proficiency</b> Swedish • French <b>Elementary proficiency</b> German
<b>Other</b>	Swedish driving license (B)

## Grants, Awards, & Honours

2017	<b>Travel grant</b> • Association Suisse de Géographie I obtained a travel grant to participate in the first Finse International Snow Workshop in Finse (Norway) and present the results of my research.
2016	<b>Photo contest winner</b> • EGU Winner of the 2016 European Geosciences Union Photo contest with the photograph "Living Flows".
2015	<b>Research Fellowship</b> • CUAHSI I was sponsored by the Consortium of Universities for the Advancement of Hydrological Sciences (CUAHSI) to participate in the first National Flood Interoperability Experiment (NFIE) at the US National Water Center in Tuscaloosa (Alabama).
2014	<b>Travel grant</b> • Liljewalchs Foundation I obtained a travel grant to participate in the EGU 2016 General Assembly in Vienna (Austria) and present the results of my research.
2009	<b>Scholarship</b> • Swedish-Spanish Foundation I obtained a scholarship from the Swedish-Spanish Foundation for the Promotion of Education and Studies to help cover the expenses as a Master student in Uppsala University.
2007	<b>Scholarship</b> • Erasmus Programme I obtained a scholarship to help cover the expenses of spending a year at the Université Joseph Fourier in Grenoble (France) as exchange student.

## Other Activities

2016 —

**Translator** • Planet Press

I translate short scientific articles for kids from the European Geosciences Union (EGU) Planet Press initiative from English to Spanish.

2013

**Volunteer** • IAHS

I volunteered supporting the organisation of the 2013 IAHS, IAPSO, IAPSEI Joint Assembly in Gothenburg (Sweden).

*References available on request.*